SITE ASSESSMENT REPORT FOR NESTED SOIL GAS PROBE INSTALLATIO SAMPLING, AND ANALYSIS

NUPLA PLASTICS CORPORATION
11912 SHELDON STREET
SUN VALLEY, CALIFORNIA
(LARWQCB FILE NO. 111.0788)

SITE ASSESSMENT REPORT FOR NESTED SOIL GAS PROBE INSTALLATION, SAMPLING, AND ANALYSIS

NUPLA PLASTICS CORPORATION
11912 SHELDON STREET
SUN VALLEY, CALIFORNIA
(LARWQCB FILE NO. 111.0788)

Prepared for:

NUPLA Plastics Corporation
11912 Sheldon Street
Sun Valley, California 91352

Prepared by:

ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.
23011 Moulton Parkway, Suite E-6
Laguna Hills, California 92653
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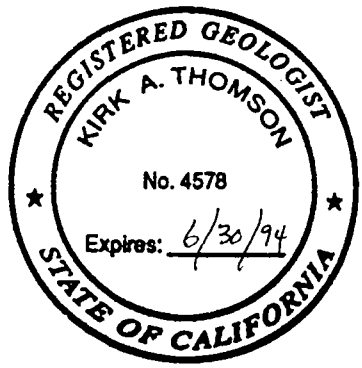
March 25, 1994

LIMITATIONS AND WARRANTIES

This Site Assessment Report has been prepared for the exclusive use of NUPLA Plastics Corporation and assigned interested parties. The report has been prepared in accordance with generally accepted environmental assessment practices. No other warranty, expressed or implied, is made.

Soil gas sample analyses are conducted using laboratory-grade gas chromatography equipment. Chemical compound identification is performed using quantitative methods. Chemical compound identities should be verified using gas chromatography/mass spectrometric analyses methods. Soil gas survey data should be used in conjunction with other site specific data.

The information provided in this report is based on measurements performed in specific areas during a specific limited period of time. In the event that any changes occur in waste management practices, site conditions, or uses of the property, the conclusions and recommendations contained in this Site Assessment Report should be reviewed and modified or verified in writing by Environmental Support Technologies, Inc.



K A. Thomson

Kirk A. Thomson, R.G., R.E.A.
Project Manager/Principal Hydrogeologist

Michael E. Tye

Michael E. Tye
Project Hydrogeologist

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1.0 INTRODUCTION

On February 22 and March 22, 1994, Environmental Support Technologies, Inc. (EST) performed site assessment activities at the NUPLA Plastics Corporation (NUPLA) site located at 11912 Sheldon Street in Sun Valley, California (Figure 1). This Site Assessment Report has been prepared to describe multi-depth nested soil gas probe installation, sampling, and analysis at the NUPLA site. The scope of work was developed based on results of previous site assessment work (EST, August 20, 1993) and was initiated by requirements of the Los Angeles Regional Water Quality Control Board (LARWQCB) set forth in a letter dated September 27, 1993. The site investigation was performed in accordance with current EPA-recommended procedures for the collection, handling, and analysis of environmental samples.

2.0 OBJECTIVES

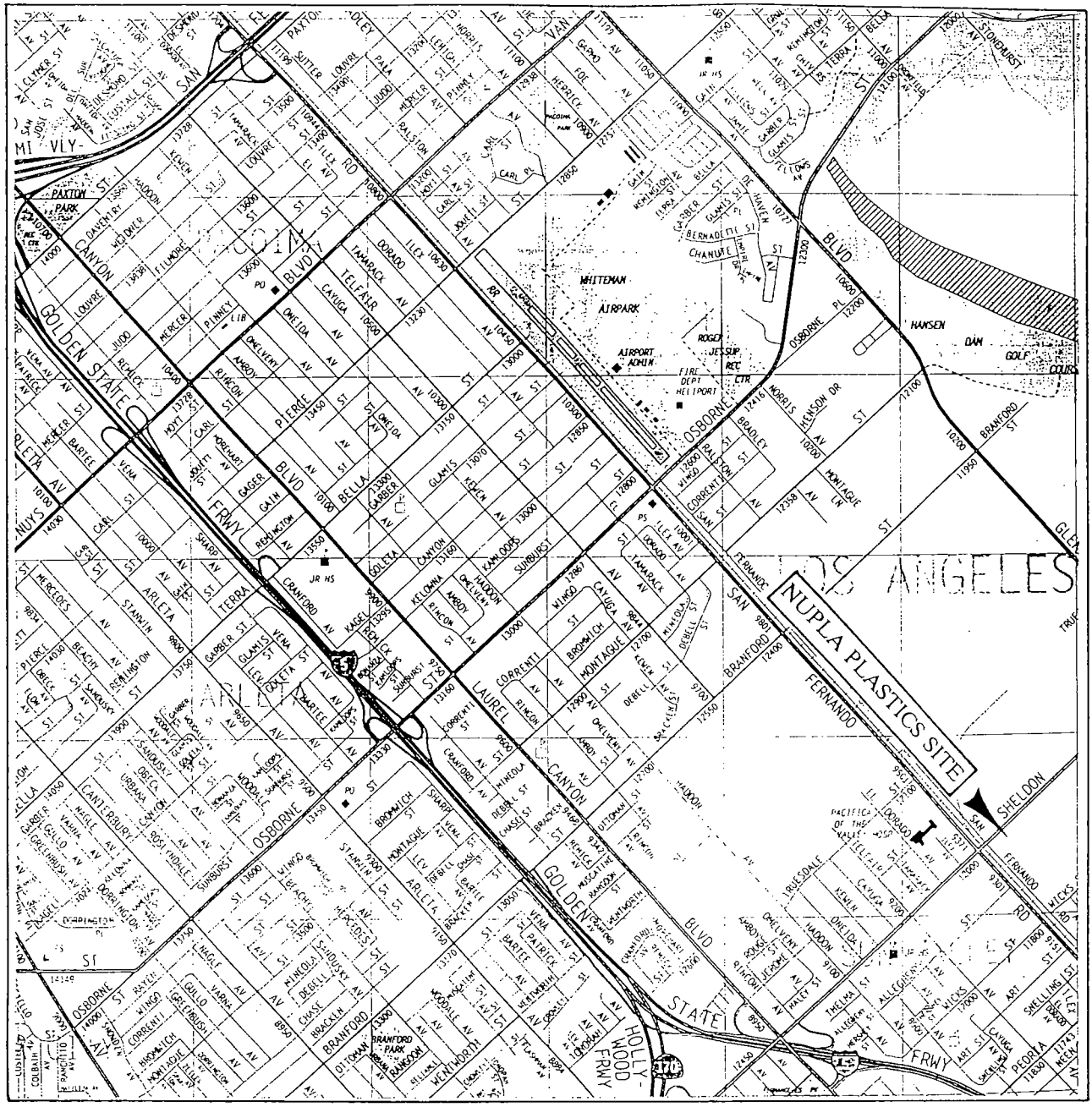
The objectives of recent site assessment activities were to evaluate the vertical extent of volatile organic compounds (VOCs) in soil gas and to characterize subsurface lithology to a depth of about 50 feet below grade at two locations at the NUPLA site. Factors affecting the gas-phase distribution of VOCs in the soil gas are discussed in Appendix A.

3.0 SCOPE OF WORK

Recent site assessment activities included:

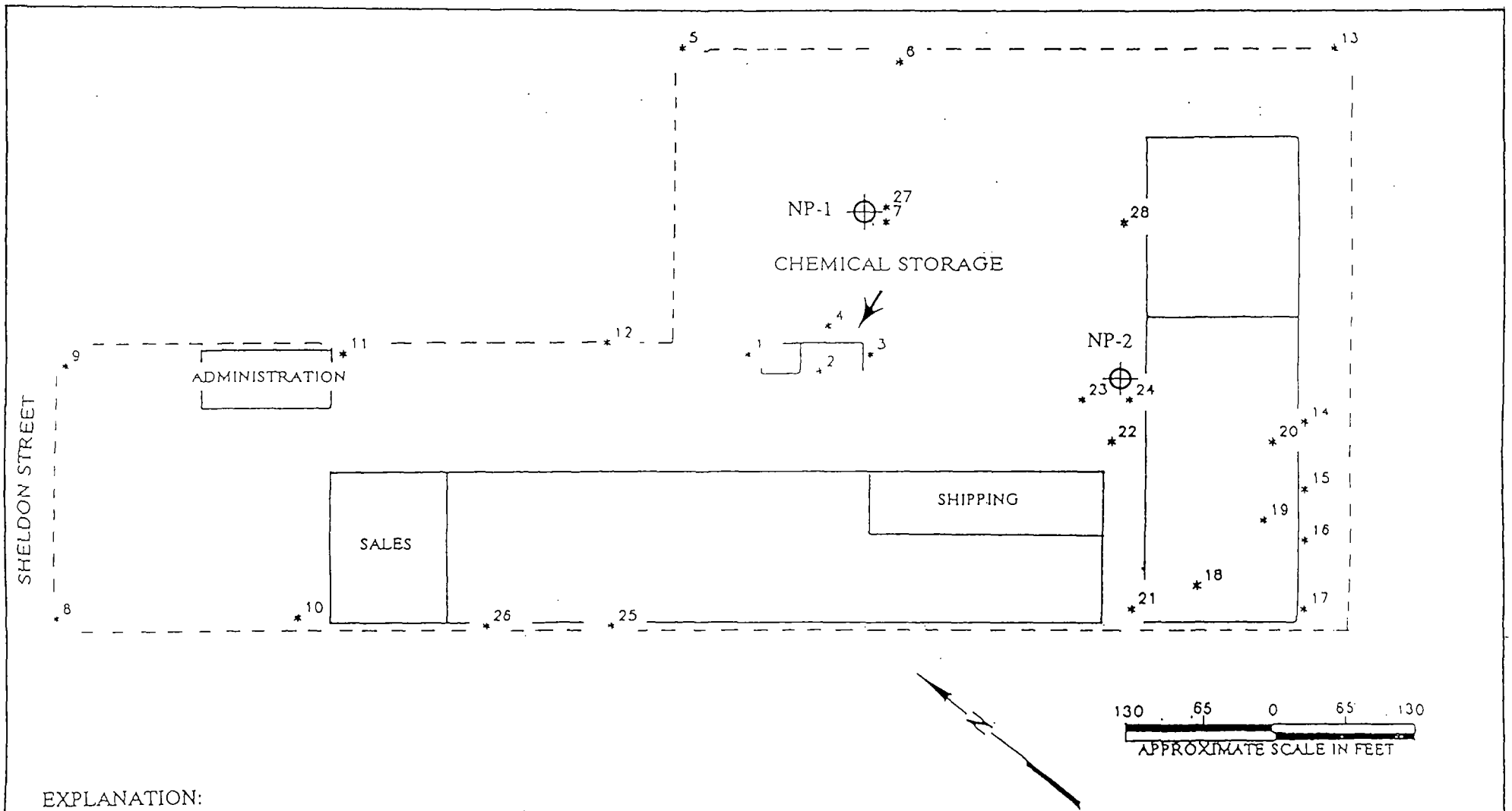
- Drilling of two soil borings to about 50-feet below grade.
- Conversion of the two soil borings to nested soil gas probe installations, with nested probes set at 20, 30, 40, and 50 feet below grade in each boring, or at horizons of interest based on field screening results and lithology.
- Collection and field analyses of soil gas samples from the nested soil gas probe installations.
- Preparation of a Site Assessment Report.

The locations of the multi-depth soil boring/nested soil gas probe installations were selected based on the results of a soil gas survey (EST, August 20, 1993) and requirements outlined by the LARWQCB (September 27, 1993). The approximate locations of previously installed driven soil gas probes and the locations of the two soil borings/nested soil gas probe installations are shown in Figure 2. The nested soil gas probe installations were located in the vicinities of previously installed and sampled driven shallow soil gas probes.



SOURCE OF MAP: Thomas Bros., 1993.

FIGURE 1
SITE LOCATION MAP
NUPLA PLASTICS CORPORATION
SITE ASSESSMENT REPORT



EXPLANATION:

* APPROXIMATE LOCATION OF A PREVIOUSLY INSTALLED SHALLOW SOIL GAS PROBE

⊕ APPROXIMATE LOCATION OF A NESTED PROBE INSTALLATION

SOURCE OF BASE MAP:
NUPLA CORPORATION

FIGURE 2
APPROXIMATE LOCATIONS OF NESTED SOIL GAS PROBE INSTALLATIONS
NP-1 AND NP-2
NUPLA PLASTICS CORPORATION
SITE ASSESSMENT REPORT

EST analyzed soil gas samples on-site using a gas chromatograph (GC) equipped with a photoionization detector (PID) and an electrolytic conductivity detector (ELCD or Hall) placed in series. This GC configuration used a megabore capillary column to allow resolution of the EPA Method 624 compounds without cryogenic trapping. The GC-PID/ELCD was used to analyze aromatic and halogenated hydrocarbons (EPA Method 8010/8020 compounds). Soil gas samples were collected and analyzed in accordance with LARWQCB requirements for active soil gas surveys (November 5, 1992).

4.0 METHODS AND PROCEDURES

This section summarizes field methods and procedures. Details of field methods and procedures were provided in the Work Plan for drilling, installation, sampling, and field analyses of nested soil gas probes (EST, January 27, 1994).

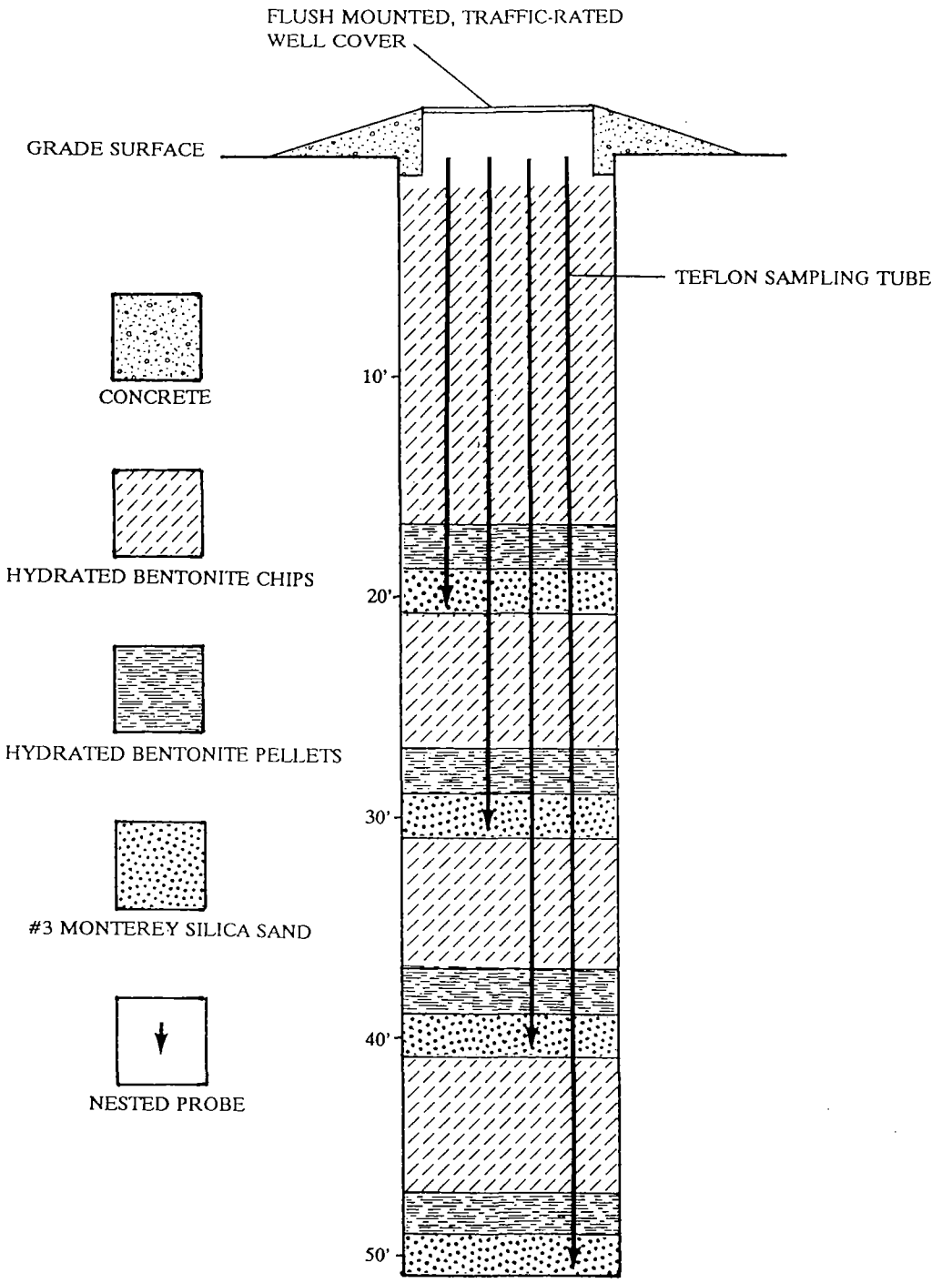
4.1 DRILLING AND BORE-HOLE LOGGING

The soil borings were advanced to total depths of about 50 feet below grade using hollow-stem auger drilling methods. During drilling, soil samples were collected at 5-foot-intervals. Soil samples were visually inspected and were classified according to Unified Soil Classification System (USCS). Soil boring logs are provided in Appendix B.

Soil samples were screened in the field for total organic vapors (TOVs) using a hand-held photo-ionization detector (PID). Soil sample screening was performed using the soil vapor headspace method, as follows. A portion of each soil sample was enclosed in a Zip-Loc™ bag and allowed to volatilize for about ten minutes. Measurements of headspace concentrations of TOVs were made by inserting the probe of the PID into the plastic bag for approximately 15 seconds and withdrawing a sample. Measurements obtained using this procedure were recorded on the boring logs as the TOV concentration representative of that sample interval. PID measurements provide qualitative estimates of conditions at the sample depth and were used to guide multi-depth nested probe placement in the two soil borings.

4.2 INSTALLATION OF MULTI-DEPTH NESTED SOIL GAS PROBES

Construction details of the nested soil gas probe installations for the NUPLA site are shown in Figure 3. The nested probes were installed at 20, 30, 40, and 50 feet below grade for both NP1 and NP2. Details of field methods and procedures were provided in the Work Plan for drilling, installation, sampling, and field analyses of nested soil gas probes (EST, January 27, 1994).



TOTAL DEPTH = APPROXIMATELY 51 FEET

VERTICAL SCALE: 1 inch = 8 feet
BOREHOLE DIAMETER EXAGGERATED FOR CLARITY

FIGURE 3
CONSTRUCTION DETAIL FOR NESTED SOIL GAS PROBE INSTALLATIONS NP-1 AND NP-2
NUPLA PLASTICS CORPORATION
SITE ASSESSMENT REPORT

4.3 SAMPLING AND ANALYSIS OF NESTED SOIL GAS PROBES

Following installation, the nested soil gas probe installation was left for a period of about one month prior to sampling to allow nested probe construction materials to equilibrate with the surrounding native subsurface geologic materials. Soil gas samples were analyzed on-site using a gas chromatograph (GC) equipped with a photo-ionization detector (PID) and an electrolytic conductivity detector (ELCD or Hall) placed in series. The GC-PID/ELCD was used to analyze aromatic and halogenated hydrocarbons (EPA Method 8010/8020 compounds). Results of field analyses for soil gas samples from nested probes are discussed in Section 5.

4.4 TREATMENT OR DISPOSAL OF INVESTIGATION-DERIVED WASTE

Soil cuttings generated by drilling were contained in labeled steel 55-gallon drums. Decontamination rinsates were also contained in 55-gallon drums. Containerized soil cuttings and rinsate was left on site pending waste characterization. Treatment and/or disposal of investigation-derived solid and liquid waste is the responsibility of NUPLA.

5.0 RESULTS OF BORE-HOLE LOGGING AND NESTED PROBE SAMPLING

Results of lithologic logging and field analyses of soil gas samples collected from the nested probe installation are discussed in this section.

5.1 LITHOLOGIC CHARACTERIZATION

Soil boring logs are provided in Appendix B. Subsurface geologic materials encountered at the NUPLA site to about 50 feet below grade were observed to consist predominantly of unconsolidated fine- to coarse-grained fluvial sands with silt. These sands were gray (Munsell color 10YR 6/1), well graded and poorly sorted near grade surface, moist, and dense. Minor gravel was observed in sands in boring NP-1 from grade to about ten feet below grade. Geologic materials were observed to be well sorted and poorly graded at depth. Lithologic materials at the NUPLA site have been classified as a sand-silt mixture (SM) based on USCS criteria.

5.2 FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES FROM NESTED PROBES

Soil gas samples were analyzed in the field for halogenated and aromatic compounds using methods similar to EPA Methods 8010/8020. Field laboratory analyses results for soil gas samples collected from nested probe installations NP1 and NP2 are summarized in Table 1. Field analyses results are provided in Appendix C.

Field analyses results for soil gas samples collected from NP1 indicate the presence of 1,1-Dichloroethene (DCE), 1,1,1-Trichloroethane (TCA), and Trichloroethene (TCE). Concentrations of DCE ranged from none detected at 10 feet below grade to a maximum detected concentration of 4 μg/L at 40 feet below grade. Concentrations of TCA ranged from none detected at 10 feet below grade to a maximum detected concentration of 4 μg/L at 30 and 40 feet below grade. Soil gas concentrations of TCE ranged from 4 μg/L at 10 feet below grade to a maximum detected concentration of 55 μg/L at 50 feet below grade.

Field analysis results for soil gas samples collected from NP2 indicate the presence of 1,1,2-Trichloro-triflouroethane (Freon 113), 1,1-Dichloroethene (DCE), Cis-1,2-Dichloroethene (C-1,2-DCE), 1,1,1-Trichloroethane (TCA), and Trichloroethene (TCE). Concentrations of Freon 113 ranged from none detected at 50, 40, 30 and 20 feet below grade to a maximum detected concentration of 222 μg/L at 10 feet below grade. Concentrations of DCE ranged from none detected at 10 feet below grade to a maximum detected concentration of 9 μg/L at 50 and 40 feet below grade. Concentrations of C-1,2-DCE ranged from none detected at 10 feet below grade to a maximum detected concentration of 3 μg/L at 40 feet below grade. Concentrations of TCA ranged from 2 μg/L at 10 feet below grade to a maximum detected concentration of 12 μg/L at 50 feet below grade. Concentrations of TCE ranged from 49 μg/L at 20 feet below grade to a maximum detected concentration of 190 μg/L at 40 feet below grade.

TABLE 1
SUMMARY OF FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
FROM NESTED PROBE INSTALLATIONS NP1 AND NP2

NUPLA CORPORATION, SUN VALLEY, CALIFORNIA
(concentrations are reported in micrograms per liter (ug/L))

rev. 4/25/94 jl
FILE: 1127NPT1.WK3

Probe Identification	Depth (feet)	Number of Times Sampled	Date(s) Sampled	FREON 113	TCE	TCA	DCE	C-1,2-DCE
NP1-10	10	1	3/22/94	ND	4	ND	ND	ND
NP1-20	20	1	3/22/94	ND	22	2	1	ND
NP1-30	30	1	3/22/94	ND	48	4	3	ND
NP1-40	40	1	3/22/94	ND	53	4	4	ND
NP1-50	50	3	3/22/94	ND	55	3	3	ND
NP2-10	10	1	3/22/94	222	93	2	ND	ND
NP2-20	20	1	3/22/94	ND	49	5	3	1
NP2-30	30	1	3/22/94	ND	124	9	8	2
NP2-40	40	1	3/22/94	ND	190	11	9	3
NP2-50	50	1	3/22/94	ND	177	12	9	2

FREON 113 = 1,1,2-Trichloro-trifluorethane
TCE = Trichloroethene
TCA = 1,1,1-Trichloroethane
DCE = 1,1-Dichloroethene
C-1,2-DCE = Cis-1,2-Dichloroethene

ND = Not Detected; constituent is below the reportable limit of quantitation for this sample.

3/23/94

REFERENCES
(in chronological order)

LARWQCB, May 8, 1993. Initial Subsurface Soils Investigation Report (April 1993, SEC Donohue). (File No. 111.0788). Letter addressed to Mr. Renzie Pintoe, NUPLA Plastics Corporation, 11912 Sheldon Street, Sun Valley, California.

Environmental Support Technologies, Inc., June 17, 1993. Work Plan to Perform a Soil Gas Survey - NUPLA Corporation, 11912 Sheldon Street, Sun Valley, California. Work Plan submitted to NUPLA Plastics Corporation and the LARWQCB.

LARWQCB, July 1, 1993. Further Requirements for Soil Gas Survey Work Plan. (File No. 111.0788). Letter addressed to Renzie Pintoe, NUPLA Plastics Corporation, 11912 Sheldon Street, Sun Valley, California.

Environmental Support Technologies, Inc., July 29, 1993. Revised Soil Gas Probe Location Map - NUPLA Corporation, 11912 Sheldon Street, Sun Valley, California. Revised Probe Location Map submitted to NUPLA Plastics Corporation and the LARWQCB.

LARWQCB, August 4, 1993. Review of Soil Gas Investigation Work Plan (File No. 111.0788). Letter addressed to Mr. Rienzie Pintoe, NUPLA Plastics Corporation, 11912 Sheldon Street, Sun Valley, California.

Environmental Support Technologies, Inc., August 20, 1993. Soil Gas Survey Report for NUPLA Corporation, 11912 Sheldon Street, Sun Valley, California (LARWQCB File No. 111.0788). Report submitted to NUPLA Plastics Corporation and the LARWQCB.

LARWQCB, September 27, 1993. Review of EST's Soil Gas Survey Report (File No. 111.0788). Letter requesting nested probe installation addressed to Mr. Jody Hill, NUPLA Plastics Corporation, 11912 Sheldon Street, Sun Valley, California.

LARWQCB, December 9, 1993. Permission to terminate soil borings for nested probe installation at 50 feet below grade instead of 120 feet below grade. (File No. 111.0788). Letter addressed to Mr. Rienzie Pintoe, NUPLA Plastics Corporation, 11912 Sheldon Street, Sun Valley, California.

Environmental Support Technologies, Inc., January 27, 1994. Work Plan for Drilling, Installation, Sampling, and Field Analyses of Nested Soil Gas Probes. NUPLA Corporation, 11912 Sheldon Street, Sun Valley, California (LARWQCB File No. 111.0788). Work Plan submitted to NUPLA Plastics Corporation and the LARWQCB.

Appendix A

FACTORS AFFECTING THE GAS-PHASE DISTRIBUTION OF VOCs IN THE SUBSURFACE

Appendix A

FACTORS AFFECTING THE GAS-PHASE DISTRIBUTION OF VOCs IN THE SUBSURFACE

Soil and groundwater contamination by volatile organic compounds (VOCs) can often be detected by analyzing trace gases in soil just below ground surface. This technique is possible because many VOCs will volatilize and move by molecular diffusion away from source areas toward regions of lower concentrations. A gas phase concentration gradient from the source to adjacent areas is established.

The following factors affect the transport and gas phase distribution of VOCs in the subsurface.

1. The liquid-gas partitioning coefficient of the compounds of interest (the "volatility" of the compound).

2. The vapor diffusivity, which is a measure of how quickly an individual compound "spreads out" within a volume of gas.

3. Retardation of the individual compounds as they migrate in the soil gas. Retardation may be due to degradation, adsorption on the soil matrix, tortuosity of the soil profile, or entrapment in unconnected pores.

4. The presence of impeding layers, wetting fronts of freshwater, or perched water tables, between the regional water table and ground surface.

5. The presence of soil moisture around man-made structures such as clarifiers and sumps may suppress volatilization and diffusion of VOCs resulting in false negative or low soil gas concentrations.

6. The presence of contaminants from localized spills or in the ambient air.

7. Movement of soil gas in response to barometric pressure changes.

8. The preferential migration of gas through zones of greater permeability (e.g. natural lithologic variation or back-fill of underground utilities).

9. The disturbance caused by air-rotary drilling or mud-rotary drilling methods.

At most sites, many of these factors are unknown or poorly understood. Because of this uncertainty, soil gas sampling should be used in conjunction with other site-specific data.

Appendix B

SOIL BORING LOGS

SOIL BORING LOG

ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.
23011 MOULTON PARKWAY, SUITE E–6
LAGUNA HILLS, CALIFORNIA 92653
(714) 457–9664

CLIENT NAME: Nupla Plastics Corporation	BORING NUMBER: NP–1
PROJECT NAME: NUPLA	BORING LOGGED BY: M. Tye
DATE: February 22, 1994	DRILLING CONTRACTOR: A & R Drilling
BEGIN DRILLING: 09:50	DRILLING METHOD: CME–85 with 4.25–inch HSA
END DRILLING: 11:00	SITE LOCATION: 11912 Sheldon Street, Sun Valley, California

TIME	DEPTH	BLOW COUNTS	PERCENT RECOVERY	TOV (PPM)	SAMPLE DESCRIPTION	USCS SOIL TYPE	LAB SAMPLE
09:50	0'	N/A	N/A	N/A	Surface = Asphalt paving, about 3" thick.	N/A	N/A
09:52	1'	N/A	N/A	ND as hexane	Medium sand with silt and gravel, gray (10YR 6/1), well graded, poorly sorted, moist, no odor.	SM	N/A
10:00	5'	4–24–20 (44)	100%	ND as hexane	Medium sand with silt and gravel, gray (10YR 6/1), well graded, poorly sorted, moist, dense, no odor.	SM	N/A
10:06	10'	5–15–50 (65)	100%	ND as hexane	Medium sand with silt and gravel, gray (10YR 6/1), well graded, poorly sorted, moist, very dense, no odor.	SM	N/A
10:15	15'	9–15–20 (35)	100%	ND as hexane	Coarse to medium sand with silt, gray (10YR 6/1), well graded, poorly sorted, moist, dense, no odor.	SM	N/A
10:18	20'	10–17–24 (41)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, moist, dense, no odor.	SM	N/A
10:25	25'	9–25–45 (70)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, moist, very dense, no odor.	SM	N/A
10:35	30'	10–24–40 (64)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, moist, very dense, no odor.	SM	N/A
10:42	35'	15–40–40 (80)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, moist, very dense, no odor.	SM	N/A
10:50	40'	15–45–45 (90)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, moist, very dense, no odor.	SM	N/A

HSA–Hollow stem auger
TOV–Total Organic Vapors
Spoon–California modified split–spoon
LAB–Sample analyzed by certified laboratory
HCO–Hydrocarbon odor
NS–Not sampled
USCS–United Soil Classification System
ND–Not detected
A–Sample archived
N/A–Not applicable

1) USCS Classifications are field derived.
2) Color designations are Munsell.
3) Subsurface information from boring logs depict conditions only at specific locations and dates indicated. Soil conditions at other locations may differ from conditions at these locations. Also the conditions at these locations may change with time.
4) (xx) Sum of last two 6–inch blow counts.

Prepared by Michael Tye

Reviewed by K. A. Thomson

SOIL BORING LOG

ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.
23011 MOULTON PARKWAY, SUITE E-6
LAGUNA HILLS, CALIFORNIA 92653
(714) 457-9664

CLIENT NAME: Nupla Plastics Corporation	BORING NUMBER: NP-1
PROJECT NAME: NUPLA	BORING LOGGED BY: M. Tye
DATE: February 22, 1994	DRILLING CONTRACTOR: A & R Drilling
BEGIN DRILLING: 09:50	DRILLING METHOD: CME-85 with 4.25-inch HSA
END DRILLING: 11:00	SITE LOCATION: 11912 Sheldon Street, Sun Valley, California

TIME	DEPTH	BLOW COUNTS	PERCENT RECOVERY	TOV (PPM)	SAMPLE DESCRIPTION	USCS SOIL TYPE	LAB SAMPLE
10:55	45'	23-50/4" (>50)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, very dense, moist, no odor.	SM	N/A
11:00	50'	50/4" (>50)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, very dense, moist, no odor.	SM	N/A
					Total depth of boring NP-1 about 51 feet below grade.		

HSA-Hollow stem auger
TOV-Total Organic Vapors
Spoon-California modified split-spoon
LAB-Sample analyzed by certified laboratory
HCO-Hydrocarbon odor

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Reviewed by K. A. Thomson

SOIL BORING LOG

ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.
23011 MOULTON PARKWAY, SUITE E-6
LAGUNA HILLS, CALIFORNIA 92653
(714) 457-9664

CLIENT NAME: Nupla Plastics Corporation	BORING NUMBER: NP-2
PROJECT NAME: NUPLA	BORING LOGGED BY: M. Tye
DATE: February 22, 1994	DRILLING CONTRACTOR: A & R Drilling
BEGIN DRILLING: 12:50	DRILLING METHOD: CME-85 with 4.25-inch HSA
END DRILLING: 14:00	SITE LOCATION: 11912 Sheldon Street, Sun Valley, California

TIME	DEPTH	BLOW COUNTS	PERCENT RECOVERY	TOV (PPM)	SAMPLE DESCRIPTION	USCS SOIL TYPE	LAB SAMPLE
12:50	0'	N/A	N/A	N/A	Surface = Asphalt paving, about 3" thick.	N/A	N/A
12:53	1'	N/A	N/A	ND as hexane	Medium sand with silt and gravel, gray (10YR 6/1), well graded, poorly sorted, moist, no odor.	SM	N/A
13:00	5'	11-16-19 (35)	100%	ND as hexane	Coarse sand with silt and gravel, gray (10YR 6/1), well graded, poorly sorted, moist, dense, no odor.	SM	N/A
13:10	10'	12-24-38 (62)	100%	1 ppm as hexane	Medium sand with silt and gravel, gray (10YR 6/1), well graded, poorly sorted, moist, very dense, no odor.	SM	N/A
13:20	15'	16-20-21 (41)	100%	1 ppm as hexane	Coarse to medium sand with silt, gray (10YR 6/1), well graded, poorly sorted, moist, dense, no odor.	SM	N/A
13:25	20'	13-16-18 (34)	100%	1 ppm as hexane	Coarse to medium sand with silt, gray (10YR 6/1), well graded, poorly sorted, moist, dense, no odor.	SM	N/A
13:30	25'	10-20-35 (55)	100%	4 ppm as hexane	Coarse to medium sand with silt, gray (10YR 6/1), well graded, poorly sorted, moist, very dense, no odor.	SM	N/A
13:35	30'	10-22-41 (63)	100%	ND as hexane	Coarse to medium sand with silt, gray (10YR 6/1), well graded, poorly sorted, moist, very dense, no odor.	SM	N/A
13:45	35'	10-26-40 (66)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, moist, very dense, no odor.	SM	N/A
13:50	40'	10-50/4" (>50)	100%	ND as hexane	Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, moist, very dense, no odor.	SM	N/A

HSA-Hollow stem auger
TOV-Total Organic Vapors
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4) (xx) Sum of last two 6-inch blow counts.

Prepared by Michael Tye

Reviewed by K. A. Thomson

SOIL BORING LOG

ENVIRONMENTAL SUPPORT TECHNOLOGIES, INC.
23011 MOULTON PARKWAY, SUITE E-6
LAGUNA HILLS, CALIFORNIA 92653
(714) 457-9664

CLIENT NAME: Nupla Plastics Corporation	BORING NUMBER: NP-2
PROJECT NAME: NUPLA	BORING LOGGED BY: M. Tye
DATE: February 22, 1994	DRILLING CONTRACTOR: A & R Drilling
BEGIN DRILLING: 12:50	DRILLING METHOD: CME-85 with 4.25-inch HSA
END DRILLING: 14:00	SITE LOCATION: 11912 Sheldon Street, Sun Valley, California

TIME	DEPTH	BLOW COUNTS	PERCENT RECOVERY	TOV (PPM)		SAMPLE DESCRIPTION	USCS SOIL TYPE	LAB SAMPLE
13:55	45'	9-35-40 (75)	100%	ND as hexane		Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, very dense, moist, no odor.	SM	N/A
14:00	50'	50/6" (>50)	100%	ND as hexane		Fine to medium sand with silt, gray (10YR 6/1), well sorted, poorly graded, very dense, moist, no odor.	SM	N/A
						Total depth of boring NP-2 about 51 feet below grade.		

HSA-Hollow stem auger
TOV-Total Organic Vapors
Spoon-California modified split-spoon
LAB-Sample analyzed by certified laboratory
HCO-Hydrocarbon odor
NS-Not sampled
USCS-United Soil Classification System
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Prepared by Michael Tye

Reviewed by K. A. Thomson

Unified Soil Classification System

Compiled by B. W. Pipkin, University of Southern California

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than half of material is larger than no. 200 sieve size.	GRAVELS More than half of coarse fraction is larger than no. 4 sieve size.	Clean gravels	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly graded gravels, gravel-sand mixtures, little or no fines.
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures.
			GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS More than half of coarse fraction is smaller than no. 4 sieve size.	Clean sands	SW	Well-graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands, gravelly sands, little or no fines.
		Sands with fines	SM	Silty sands, sand-silt mixtures.
			SC	Clayey sands, sand-clay mixtures.
FINE-GRAINED SOILS More than half of material is smaller than no. 200 sieve size.	SILTS AND CLAYS	Low liquid limit	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts, with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
		High liquid limit	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
Highly organic soils			Pt	Peat and other highly organic silts.

NOTES:

1. Boundary Classification: Soils possessing characteristics of two groups are designated by combinations of group symbols. For example, GW-GC, well-graded gravel-sand mixture with clay binder
2. All sieve sizes on this chart are U.S. Standard.
3. The terms "silt" and "clay" are used respectively to distinguish materials exhibiting lower plasticity from those with higher plasticity. The minus no. 200 sieve material is silt if the liquid limit and plasticity index plot below the "A" line on the plasticity chart (next page), and is clay if the liquid limit and plasticity index plot above the "A" line on the chart.
4. For a complete description of the Unified Soil Classification System, see "Technical Memorandum No. 3-357," prepared for Office, Chief of Engineers, by Waterways Equipment Station, Vicksburg, Mississippi, March 1953. (See also Data Sheet 17.)

Appendix C

FIELD ANALYSES RESULTS
FOR
SOIL GAS SAMPLES FROM NESTED PROBES

TABLE B-1
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
NUPLA CORPORATION, SUN VALLEY, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 3/22/94
FILE: 1127NPSGR.WK3

SAMPLE	RT	ARF	NP1-50	NP1-50	NP1-50	NP1-40	NP1-30	NP1-20	NP1-10	NP2-50
DATE			3/22/94	3/22/94	3/22/94	3/22/94	3/22/94	3/22/94	3/22/94	3/22/94
TIME			10:47	11:47	12:19	13:12	13:41	14:06	14:29	14:52
INJECTION VOLUME (ul)			500	500	500	500	500	500	500	500
PURGE VOLUME (ml)			350	700	1100	600	400	300	200	700
VACUUM (in. Hg)			ND	ND	ND	ND	ND	ND	ND	ND
COMMENTS										
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dichlorodifluoromethane	5:75	4.2E+08	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Vinyl Chloride	6:05	1.1E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroethane	6:35	3.4E+08	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trichlorofluoromethane	6:75	1.7E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichloro-trifluoroethane	7:35	6.5E+08	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	1.63E+06	1.45E+06	2.27E+06	1.67E+06	5.34E+05	0.00E+00	4.62E+06
1,1-Dichloroethene	7:70	1.1E+09	ND	3	3	4	3	1	ND	9
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Dichloromethane	8:40	1.3E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Trans-1,2-Dichloroethene	8:90	1.3E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1-Dichloroethane	9:55	2.3E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E+06
Cis-1,2-Dichloroethene	10:60	1.7E+09	ND	ND	ND	ND	ND	ND	ND	2
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chloroform	10:85	1.9E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	2.18E+06	2.01E+06	2.84E+06	2.23E+06	1.10E+06	2.68E+05	7.59E+06
1,1,1-Trichloroethane	11:65	1.3E+09	ND	3	3	4	4	2	ND	12
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Carbon Tetrachloride	12:20	1.0E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene	12:40	9.5E+06	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,2-Dichloroethane	12:35	1.7E+09	ND	ND	ND	ND	ND	ND	ND	ND
			2.07E+06	3.56E+07	2.99E+07	3.44E+07	3.10E+07	1.41E+07	2.29E+06	1.15E+08
Trichloroethene	13:70	1.3E+09	3	55	46	53	48	22	4	177
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene	16:60	1.1E+07	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2-Trichlorethane	17:45	2.6E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	2.35E+05	0.00E+00	2.52E+05	0.00E+00	0.00E+00	0.00E+00	3.87E+05
Tetrachloroethene	18:40	2.6E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,1,2-Tetrachloroethane	20:75	2.7E+09	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ethylbenzene	20:65	1.0E+07	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Para and Meta-Xylene	20:85	2.3E+07	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ortho-Xylene	22:20	1.1E+07	ND	ND	ND	ND	ND	ND	ND	ND
			0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
1,1,2,2-Tetrachloroethane	23:75	3.4E+09	ND	ND	ND	ND	ND	ND	ND	ND

ND = Not Detected; constituent is below the reportable limit of quantitation for this sample.
Concentrations reported in micrograms/Liter (ug/L).
RT = Retention Time ARF = Average Response Factor

3/22/94

Analyst _____ Reviewed By _____

TABLE B-1
FIELD ANALYSES RESULTS FOR SOIL GAS SAMPLES
NUPLA CORPORATION, SUN VALLEY, CALIFORNIA
25-TARGET COMPOUND LIST

PID/ELCD #1 - 3/22/94
FILE: 1127NPSGR.WK3

SAMPLE	RT	ARF	NP2-40	NP2-30	NP2-20	NP2-10	NA	NA	NA	NA
DATE			3/22/94	3/22/94	3/22/94	3/22/94	NA	NA	NA	NA
TIME			15:16	15:40	16:03	16:26	NA	NA	NA	NA
INJECTION VOLUME (ul)			500	500	500	500				
PURGE VOLUME (ml)			600	400	300	200				
VACUUM (in. Hg)			ND	ND	ND	ND				
COMMENTS										
Dichlorodifluoromethane	5:75	4.2E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Vinyl Chloride	6:05	1.1E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroethane	6:35	3.4E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichlorofluoromethane	6:75	1.7E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichloro-trifluoroethane	7:35	6.5E+08	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	7.18E+07 222	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethene	7:70	1.1E+09	4.93E+06 9	4.31E+06 8	1.41E+06 3	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Dichloromethane	8:40	1.3E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trans-1,2-Dichloroethene	8:90	1.3E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1-Dichloroethane	9:55	2.3E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Cis-1,2-Dichloroethene	10:60	1.7E+09	2.28E+06 3	1.99E+06 2	8.55E+05 1	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Chloroform	10:85	1.9E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1-Trichloroethane	11:65	1.3E+09	6.77E+06 11	6.02E+06 9	3.37E+06 5	1.15E+06 2	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Carbon Tetrachloride	12:20	1.0E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Benzene	12:40	9.5E+06	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,2-Dichloroethane	12:35	1.7E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Trichloroethene	13:70	1.3E+09	1.24E+08 190	8.03E+07 124	3.21E+07 49	6.03E+07 93	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Toluene	16:60	1.1E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2-Trichlorethane	17:45	2.6E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Tetrachloroethene	18:40	2.6E+09	4.22E+05 ND	4.58E+05 ND	2.76E+05 ND	3.16E+05 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,1,2-Tetrachloroethane	20:75	2.7E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ethylbenzene	20:65	1.0E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Para and Meta-Xylene	20:85	2.3E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
Ortho-Xylene	22:20	1.1E+07	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND
1,1,2,2-Tetrachloroethane	23:75	3.4E+09	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND	0.00E+00 ND

ND = Not Detected; constituent is below the reportable limit of quantitation for this sample.
Concentrations reported in micrograms/Liter (ug/L).
RT = Retention Time ARF = Average Response Factor

3/22/94

Analyst _____ Reviewed By _____

TABLE B-2
QUALITY CONTROL DATA REPORT
NUPLA CORPORATION, SUN VALLEY, CALIFORNIA
SOIL GAS SURVEY

PID/ELCD #1
DATE: 3/22/94
FILE: 127NPQCR.WK3

SAMPLE	RT	ARF	QC CHECK SAMPLE	RPD	BLANK	QC CHECK SAMPLE	RPD	QC CHECK SAMPLE	RPD
DATE			3/22/94		3/22/94	3/22/94			
TIME			09:16		09:46	16:49			
INJECTION VOLUME (ul)			1		500	1			
ACTUAL CONCENTRATION (ug/L)			5000			5000			
Dichlorodifluoromethane	5.75	4.22E+08	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
Vinyl Chloride	6:05	1.05E+09	5.63E+06 5365.0	7	0.00E+00 ND	5.77E+06 5492.9	9	0.00E+00 ND	NA
Chloroethane	6:35	3.41E+08	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
Trichlorofluoromethane	6:75	1.72E+09	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
1,1,2-Trichloro-trifluoroethane	7:35	6.47E+08	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
1,1-Dichloroethene	7:70	1.05E+09	3.93E+06 3740	-34	0.00E+00 ND	4.63E+06 4412	-13	0.00E+00 ND	NA
Methylene chloride	8:40	1.27E+09	5.26E+06 4138	-21	0.00E+00 ND	5.89E+06 4640	-8	0.00E+00 ND	NA
Trans-1,2-Dichloroethene	8:90	1.25E+09	5.29E+06 4231	-18	0.00E+00 ND	5.22E+06 4176	-20	0.00E+00 ND	NA
1,1-Dichloroethane	9:55	2.32E+09	1.14E+07 4900	-2	0.00E+00 ND	1.24E+07 5343	6	0.00E+00 ND	NA
Cis-1,2-Dichloroethene	10:60	1.72E+09	8.93E+06 5190	4	0.00E+00 ND	9.33E+06 5426	8	0.00E+00 ND	NA
Chloroform	10:85	1.85E+09	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
1,1,1-Trichloroethane	11:65	1.27E+09	5.29E+06 4165	-20	0.00E+00 ND	6.03E+06 4750	-5	0.00E+00 ND	NA
Carbon Tetrachloride	12:20	1.03E+09	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
Benzene	12:40	9.46E+06	5.93E+04 6266	20	0.00E+00 ND	4.00E+04 4228	-18	0.00E+00 ND	NA
1,2-Dichloroethane	12:35	1.70E+09	1.22E+07 7188	30	0.00E+00 ND	9.22E+06 5424	8	0.00E+00 ND	NA
Trichloroethene	13:70	1.30E+09	5.06E+06 3895.5	-28	0.00E+00 ND	6.01E+06 4622.9	-8	0.00E+00 ND	NA
Toluene	16:60	1.09E+07	5.66E+04 5197	4	0.00E+00 ND	6.48E+04 5943	16	0.00E+00 ND	NA
1,1,2-Trichlorethane	17:45	2.58E+09	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
Tetrachloroethene	18:40	2.63E+09	1.17E+07 4461.9	-12	0.00E+00 ND	1.38E+07 5256.8	5	0.00E+00 ND	NA
1,1,1,2-Tetrachloroethane	20:75	2.72E+09	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA
Ethylbenzene	20:65	1.03E+07	5.29E+04 5138	3	0.00E+00 ND	5.76E+04 5593	11	0.00E+00 ND	NA
Para and Meta-Xylene	20:85	2.29E+07	1.36E+05 5928	16	0.00E+00 ND	1.55E+05 6787	26	0.00E+00 ND	NA
Ortho-Xylene	22:20	1.13E+07	5.31E+04 4702	-6	0.00E+00 ND	6.02E+04 5327	6	0.00E+00 ND	NA
1,1,2,2-Tetrachloroethane	23:75	3.40E+09	0.00E+00 ND	NA	0.00E+00 ND	0.00E+00 ND	NA	0.00E+00 ND	NA

NA = QC Check sample was not analyzed for this compound.
ARF = Average Response Factor

RT = Retention Time of Compound

3/22/94

Analyst [signature]

Reviewed By [signature]

TABLE B-3
RESPONSE FACTORS FOR THREE POINT CALIBRATION
NUPLA CORPORATION, SUN VALLEY, CALIFORNIA
MARCH 22, 1994

PID/ELCD #1
FILE: 127NP3PT.WK3

STANDARD CONC. (ug/L) INJECTION VOLUME(uL) COMPOUND/WEIGHT(ug)	RT	5000 0.50 0.00250	5000 1.00 0.00500	5000 1.50 0.00750	Average RF	Std Dev	Relative % STD Deviation
Dichlorodifluoromethane	5.75	1132580	1842110	3329765			
CF		4.53E+08	3.68E+08	4.44E+08	4.22E+08	4.65E+07	11
Vinyl chloride	6.05	2806157	6211875	5905597			
CF		1.12E+09	1.24E+09	7.87E+08	1.05E+09	2.36E+08	22
Chloroethane	6.35	1349313	1525734	1335938			
CF		5.40E+08	3.05E+08	1.78E+08	3.41E+08	1.83E+08	54
Trichlorofluoromethane	6.75	4281930	10311384	10375312			
CF		1.71E+09	2.06E+09	1.38E+09	1.72E+09	3.40E+08	20
1,1,2-Trichloro-trifluoroethane	7.35	1707021	2720869	5353229			
CF		6.83E+08	5.44E+08	7.14E+08	6.47E+08	9.03E+07	14
1,1-Dichloroethene	7.70	2715734	4446762	8823834			
CF		1.09E+09	8.89E+08	1.18E+09	1.05E+09	1.47E+08	14
Methylene chloride	8.40	3633634	5271984	9870086			
CF		1.45E+09	1.05E+09	1.32E+09	1.27E+09	2.03E+08	16
trans-1,2-Dichloroethene	8.90	3088542	5194842	11156784			
CF		1.24E+09	1.04E+09	1.49E+09	1.25E+09	2.25E+08	18
1,1-Dichloroethane	9.55	6718042	12293432	13629792			
CF		2.69E+09	2.46E+09	1.82E+09	2.32E+09	4.51E+08	19
Cis-1,2-Dichloroethene	10.60	4738240	9289114	10559344			
CF		1.90E+09	1.86E+09	1.41E+09	1.72E+09	2.71E+08	16
Chloroform	10.85	3969840	7082787	19183872			
CF		1.59E+09	1.42E+09	2.56E+09	1.85E+09	6.15E+08	33
1,1,1-Trichloroethane	11.65	3363512	5291466	10644864			
CF		1.35E+09	1.06E+09	1.42E+09	1.27E+09	1.91E+08	15
Carbon tetrachloride	12.20	2710346	4146570	8763322			
CF		1.08E+09	8.29E+08	1.17E+09	1.03E+09	1.77E+08	17
Benzene	12.40	22450	50023	70507			
CF		8.98E+06	1.00E+07	9.40E+06	9.46E+06	5.15E+05	5
1,2-Dichloroethane	12.35	4242829	8094781	13361016			
CF		1.70E+09	1.62E+09	1.78E+09	1.70E+09	8.13E+07	5
Trichloroethene	13.70	3433446	5427773	10760960			
CF		1.37E+09	1.09E+09	1.43E+09	1.30E+09	1.86E+08	14
Toluene (PID)	16.60	28475	60030	68984			
CF		1.14E+07	1.20E+07	9.20E+06	1.09E+07	1.48E+06	14
1,1,2-Trichloroethane	17.45	6754829	13711136	17326688			
CF		2.70E+09	2.74E+09	2.31E+09	2.58E+09	2.39E+08	9
Tetrachloroethene	18.40	7178138	14200440	16412176			
CF		2.87E+09	2.84E+09	2.19E+09	2.63E+09	3.86E+08	15
1,1,1,2-Tetrachloroethane	20.75	7240112	14348672	17997888			
CF		2.90E+09	2.87E+09	2.40E+09	2.72E+09	2.79E+08	10
Ethylbenzene (PID)	20.65	29134	51096	67284			
CF		1.17E+07	1.02E+07	8.97E+06	1.03E+07	1.34E+06	13
m,p-Xylene (PID)	20.85	60453	109687	169684			
CF		2.42E+07	2.19E+07	2.26E+07	2.29E+07	1.15E+06	5
o-Xylene (PID)	22.20	35401	49352	75012			
CF		1.42E+07	9.87E+06	1.00E+07	1.13E+07	2.44E+06	22
1,1,2,2-Tetrachloroethane	23.75	8792787	18148528	22790624			
CF		3.52E+09	3.63E+09	3.04E+09	3.40E+09	3.14E+08	9

RT = Retention Time
RF = Response Factor
Std. Dev. = Standard Deviation

3/22/94

Analyst _____ Reviewed By _____